

Development of Water Quality Standards for Willard Spur

Update on Evaluation of Perry Willard Regional Wastewater Plant Impacts



Photo: John Luft/UDWR, July 17, 2012

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Willard Spur Research Plan

What water quality standards are fully protective of beneficial uses of Willard Spur waters as they relate to the proposed POTW?

What are the potential impacts of the Perry Willard Regional Wastewater Treatment Plant on Willard Spur?

What will be required to provide long term protection of Willard Spur?

Make Recommendations

Research Area 1
Food Web

Bird Survey, Use and Diet Study

Fish Survey and Use Study

Macroinvertebrates Study

Habitat/Vegetation Study

Watershed Connections

Estimating a Watershed Mass Balance

Estimating a Watershed Mass Balance

Continuation of Current Field Sampling

Research Area 2
Eutrophication Responses

Nutrient Cycling - Sediment

Nutrient Cycling - Vegetation

Nutrient Cycling - Vegetation

Looking at historic and current changes due to nutrients

Looking at potential future changes due to nutrients



If the Plant does have an impact, what options could be considered?

- **What goals would any recommendations to minimize impacts from the Plant need to achieve?**

- Reduce the nutrient concentration and load
- Reduce the quantity of water and load
- Minimize incidence of discharge
- If discharge, maximize the peak of discharge to minimize period of discharge





Options to Consider for the Plant

- **Modify UPDES permit to define discharge locations**
- **Maintain chemical phosphorus removal**
- **Discharge to private property/pasture**
 - Formalize agreement with landowner
 - Land application requirements/permits
 - Water management plan





Options to Consider for the Plant

- **Re-purpose State Park Lagoons**
 - Connect State Park to the Plant
 - Storage/evaporation of effluent
 - Nutrient reduction
 - Will require a management plan
- **Constructed Treatment Wetland**
- **Phragmites control plan**



2011

2012-2013

2014

